

TOTAL UK LIMITED

MATERIAL SAFETY DATA SHEET



**REGULAR BURNING OIL
LOW SULPHUR REGULAR BURNING OIL
AVIATION FUELS (AVTUR)**

**BS 2869: CLASS C2
BS 2869: CLASS C2
JET A1 & F34/FSII**

**1 IDENTIFICATION OF THE SUBSTANCE & OF THE COMPANY /
UNDERTAKING**

IDENTIFICATION OF THE SUBSTANCE OR PREPARATION:

These products are kerosine type fuels. Regular Burning Oils are used in domestic burners and industrial and agricultural space heaters. Jet A1 and F34 are aviation turbine engine fuels.

Contains: kerosine

Regular Burning Oils	CAS No. 64742-81-0	EINECS No. 265-184-9
Avtur Aviation Fuels	CAS No. 91770-15-9	EINECS No. 294-799-5

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2 COMPOSITION / INFORMATION ON INGREDIENTS:

Complex mixtures of straight run distillates consisting of hydrocarbons mainly in the C₉-C₁₆ range. Avtur may contain small amounts of approved additives to combat oxidation, corrosion, static and icing. Burning Oil contains 2 ppm Coumarin, and 6 ppm Solvent Yellow 124, Customs and Excise markers. Benzene (CAS No. 71-43-2) may be present in trace amounts, but will always be less than 0.1% marker level in the Dangerous Substances Directive. These additives do not contribute any additional hazard.

Total kerosines are **not** classified as carcinogenic under the Dangerous Substances Directive 67/548/EEC, or the UK "CHIP" regulations

3 HAZARDS IDENTIFICATION
Regular Burning Oils and Avtur Aviation Fuel are classified as flammable. Kerosines are classified as harmful due to the aspiration hazard. Prolonged and repeated skin contact can lead to irritation and dermatitis.

4 FIRST AID MEASURES	
<u>TYPE OF EXPOSURE</u>	<u>FIRST AID MEASURES</u>
Ingestion The swallowing of small amounts is unlikely to have adverse effects; larger amounts may cause irritation with diarrhoea and vomiting.	Ingestion Wash mouth out with water and give water to drink. If a large amount has been swallowed get medical advice; DO NOT INDUCE VOMITING BECAUSE OF THE DANGER OF ASPIRATION.
Skin Unlikely to cause irritation on single contact. Prolonged or repeated contact may cause short-term irritation, de-fatting of the skin and could result in dermatitis.	Skin Wash skin as soon as possible with soap and water. Change contaminated clothing immediately and launder before reuse. Get medical advice if irritation persists.
Eyes May cause short-term irritation with redness and stinging.	Eyes Wash out immediately with large amounts of water. If redness and/or irritation continues get medical advice.
Inhalation Fumes or vapour may cause irritation to eyes and mucous membranes, and drowsiness leading to loss of consciousness.	Inhalation If inhalation of vapour causes irritation or drowsiness remove to fresh air. Get medical advice if the symptoms continue.

5 FIRE-FIGHTING MEASURES

Extinguish with Dry Powder, water mists (fogs) or Foam. For small fires use CO₂

Do not use water jets.

Fires in closed or confined spaces should be tackled by trained personnel who should wear breathing apparatus.

6 ACCIDENTAL RELEASE MEASURES

Treat any spillage as a fire hazard. Spray, vapour or mist can be a potential fire or explosion hazard.

May cause damage to surfaces making them SLIPPERY.

Contain spillage - do not wash spillage down drain. Absorb using absorbent clay, diatomaceous clay or other suitable absorbent.

7 HANDLING AND STORAGE**7.1 Handling**

Kerosines designed to be used in closed systems. Avoid skin contact when refuelling engines or working on fuel system components. Where exposure is likely PROTECTIVE CLOTHING should be worn including impervious GLOVES and EYE PROTECTION. Ensure good ventilation.

7.2 Storage

Store in tanks and containers designed to contain flammable liquids and ensure storage area is not close to heat and ignition sources.

Drums should be stored on their sides on racks preferably under cover, out of direct sunlight, in well ventilated conditions.

Other types of containers should be stored under cover out of direct sunlight, in well ventilated conditions. Care should be taken to avoid over-stacking.

8 EXPOSURE CONTROL / PERSONAL PROTECTION

Where prolonged or repeated exposure is likely PROTECTIVE CLOTHING should be worn including impervious GLOVES and EYE PROTECTION.

Respiratory protection - Unlikely to be required in normal use but ensure good ventilation. It is suggested that exposure is kept below the level for Oil Mist quoted in the current HSE Guidance Note EH 40

Long term exposure limit - (8 hour TWA reference period) 5 milligrams per cubic metre.

Short term exposure limit - (15 minute reference period) - 10 milligrams per cubic metre.

Hand and skin protection - Hand and skin protection recommended at all times. Where exposure is likely protective clothing must be worn, including nitrile gloves approved to BS EN 374 with a breakthrough time of >360 minutes.

Eye protection - Eye protection approved to BS EN 166 is recommended at all times

9 PHYSICAL AND CHEMICAL PROPERTIES

Typical properties:

Appearance	Clear pale-yellow fluid
Odour	Characteristic
pH	Not applicable
Boiling Range °C	140 – 300
Flash Point (Abel) °C	38 min.
Flammability Limits % vol	1 - 6
Auto ignition temperature °C	approx. 240
Explosive properties	Not applicable
Oxidising properties	Not applicable
Reid Vapour Pressure at 20 °C, kPa	<0.1
Density at 15°C	0.78 - 0.82
Solubility - water	Very low
- fat	Not available
Partition coefficient - Log Pow	3 - > 6 for components
Viscosity cSt @ 40°C	1 - 2
Vapour density (relative to air)	> 5
Evaporation rate (n butyl acetate = 1)	0.01
Benzene content % m/m	<0.1

10 STABILITY AND REACTIVITY

Conditions to Avoid - heat (classified Flammable)

Materials to Avoid - may react with strong oxidising materials.

Hazardous Decomposition Products - thermal decomposition may lead to the formation of a multiplicity of compounds some of which may be hazardous. With incomplete combustion smoke and hazardous fumes and gases, including carbon monoxide may be formed.

11 TOXICOLOGICAL INFORMATION

Toxicity following a single exposure to high levels of kerosines (oral, dermal, inhalation) is of a very low order. Prolonged and repeated contact with kerosines may cause drying of the skin and possibly dermatitis. Prolonged inhalation of mists may cause inflammation of the lungs. Aspiration is considered to be a hazard.

12 ECOLOGICAL INFORMATION

Toxic to aquatic life, with aquatic toxicity data for Fish, Daphnia and Algae in the range 1 – 100 mg/l, but unlikely to persist for sufficient time to pose a significant hazard; however films formed on water may affect oxygen transfer and damage organisms. Expected to biodegrade slowly, but may not meet the criteria for ready biodegradability. Components have Log Kow in the range 3.3 to greater than 6.

13 DISPOSAL CONSIDERATIONS

Disposal should be carried out as stipulated in any Local Authority Regulations. Under no circumstances should kerosines be discharged into the public drainage system, or marine and inland waterways.

14 TRANSPORT INFORMATION

TRANSPORT CLASSIFICATION

Flammable liquid: Diamond Symbol
UN Number (Substance Identification Number): 1223
HAZCHEM Code: 3/Y

UN: Flammable liquid, Class 3 (III)
UN Packing Group: III IMO Hazard Class: 3.3 ADR/RID Hazard Class: 3. (F1)
IATA: Flammable liquid Class 3, Packing Group III.

15 REGULATORY INFORMATION

LABELLING

Symbol: Black St. Andrew's cross on orange background (Xn)
Dead fish and tree (N)

Classification: Flammable; Harmful; Irritant, Dangerous for the environment

- R10 - Flammable
R65 - Harmful: May cause lung damage if swallowed
R38 - Irritating to the skin
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- S2 - Keep out of reach of children
S23 - Do not breathe vapour/spray
S24 - Avoid contact with skin
S43 - In case of fire use foam/dry powder/CO₂/Halon
Never use water jets.
S61 - Avoid release to the environment. Refer to special instructions/Safety Data Sheet
S62 - If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label

16 OTHER INFORMATION

Further information can be found in Health and Safety Executive publications, a list of which may be made available on request from HSE Books - Tel: 01787 881165.

This data sheet has been prepared in accordance with the requirements of the Data Sheet Directive 91/155/EEC as amended by Directive 2001/58/EC.

LEGAL NOTICE

The information in this Data Sheet applies only to the products designated herein and produced or supplied by Total or its subsidiary companies. It is based on our experience and on the data available to us at the time of its issue and is accurate to the best of our knowledge. The customer is strongly advised to observe and ensure that its employees and customers observe all directions contained herein. However, no warranty is made or implied that the information is accurate or complete and no liability will be accepted whatsoever - (other than liability in respect of the matters referred to in Section 2 Unfair Contract Terms Act 1977) arising out of the use of the information or the products designated herein. Where third party products are used in conjunction with or instead of products produced or supplied by Total or its subsidiary companies, the customers should himself obtain all necessary technical, health and safety information about such products from the third party.

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REGULAR BURNING OIL
AVTUR AVIATION FUEL